

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
2 December 2004 (02.12.2004)

PCT

(10) International Publication Number  
**WO 2004/103961 A3**

(51) International Patent Classification<sup>7</sup>: **C07D 217/04,**  
A61K 31/47

(21) International Application Number:  
PCT/US2004/015731

(22) International Filing Date: 19 May 2004 (19.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/471,346 19 May 2003 (19.05.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

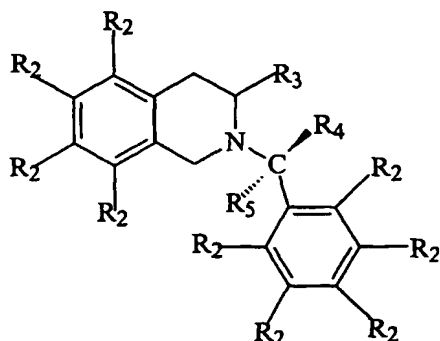
Published:

— with international search report

(88) Date of publication of the international search report:  
14 April 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SULFATED BIS-CYCLIC AGENTS



(57) Abstract: Sulfated bis-cyclic compounds that are potent anticoagulants and methods for their manufacture are provided. The sulfated compounds are bis-cyclic moieties comprised of an ioquinoline ring joined to a phenyl ring with the general chemical structure formula (I) where R<sub>2</sub> is hydrogen or a sulfate moiety, R<sub>3</sub> is either hydrogen or carboxylate moiety; R<sub>4</sub> is a hydrogen or oxygen; and R<sub>5</sub> is a hydrogen if R<sub>4</sub> is a hydrogen, and is absent if R<sub>4</sub> is oxygen. Counterions such as sodium may also be coordinated to the sulfate and carboxylate moieties.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/15731

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07D 217/04; A61K 31/47

US CL : 546/146,149; 514/307

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 546/146,149; 514/307

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
CAS ONLINE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Gunnarsson et al. Designing Small, Nonsugar Activators of Antithrombin Using Hydropathic Interaction Analyses. J. Med. Chem. 2000. Vol. 45, pages 1233-1243.	1-15
A	Gunnarsson et al. Interaction of Designed Sulfated Favalanoids with Antithrombin: Lessons on the Design of Organic Activators. J. Med. Chem. 2002. Vol. 45. pages 4460-4470.	1-15

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"X"

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"&"

document member of the same patent family

Date of the actual completion of the international search

21 October 2004 (21.10.2004)

Date of mailing of the international search report

21 JAN 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US

Commissioner for Patents

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